

1 WHAT IS CLAIMED IS:

2 1. A compound of the formula

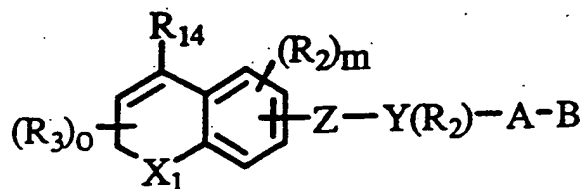
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8 wherein X_1 is $[\text{C}(\text{R}_1)_2]_n$ where R_1 is independently H or alkyl of
 9 1 to 6 carbons, and n is an integer between 0 and 2;

10 Z is -N=N-,

11 -N(O)=N-,

12 -N=N(O)-,

13 -N=CR₁-,14 -CR₁=N,15 -(CR₁=CR₁)_{n'}- where n' is an integer having the value 0 -

16 5,

17 -CO-NR₁-,18 -CS-NR₁-,19 -NR₁-CO,20 -NR₁-CS,

21 -COO-,

22 -OCO-;

23 -CSO-;

24 -OCS-;

25 -CO-CR₁=CR₁-;

26 R_2 is hydrogen, lower alkyl of 1 to 6 carbons, F, Cl, Br, I, CF₃,
 27 fluoro substituted alkyl of 1 to 6 carbons, OH, SH, alkoxy of 1 to
 28 6 carbons, or alkylthio of 1 to 6 carbons;

- 1 R_3 is hydrogen, lower alkyl of 1 to 6 carbons or F;
 2 m is an integer having the value of 0 - 3;
 3 o is an integer having the value of 0 - 3;
 4 Y is a phenyl or naphthyl group, or heteroaryl selected from a
 5 group consisting of pyridyl, thienyl, furyl, pyridazinyl, pyrimidinyl,
 6 pyrazinyl, thiazolyl, oxazolyl, imidazolyl and pyrrazolyl, said phenyl
 7 and heteroaryl groups being optionally substituted with one or two
 8 R_2 groups, or
 9 when Z is $-(CR_1=CR_1)_{n'}$ and n' is 3, 4 or 5 then Y represents a
 10 direct valence bond between said $(CR_2=CR_2)_{n'}$ group and B;
 11 A is $(CH_2)_q$ where q is 0-5, lower branched chain alkyl
 12 having 3-6 carbons, cycloalkyl having 3-6 carbons, alkenyl having
 13 2-6 carbons and 1 or 2 double bonds, alkynyl having 2-6 carbons
 14 and 1 or 2 triple bonds;
 15 B is hydrogen, COOH or a pharmaceutically acceptable salt
 16 thereof, $COOR_8$, $CONR_9R_{10}$, $-CH_2OH$, CH_2OR_{11} , CH_2OCOR_{11} ,
 17 CHO , $CH(OR_{12})_2$, $CHOR_{13}O$, $-COR_7$, $CR_7(OR_{12})_2$, $CR_7OR_{13}O$, or
 18 $Si(C_{1-6}alkyl)_3$, where R_7 is an alkyl, cycloalkyl or alkenyl group
 19 containing 1 to 5 carbons, R_8 is an alkyl group of 1 to 10 carbons
 20 or trimethylsilylalkyl where the alkyl group has 1 to 10 carbons, or
 21 a cycloalkyl group of 5 to 10 carbons, or R_8 is phenyl or lower
 22 alkylphenyl, R_9 and R_{10} independently are hydrogen, an alkyl
 23 group of 1 to 10 carbons, or a cycloalkyl group of 5-10 carbons, or
 24 phenyl or lower alkylphenyl, R_{11} is lower alkyl, phenyl or lower
 25 alkylphenyl, R_{12} is lower alkyl, and R_{13} is divalent alkyl radical of
 26 2-5 carbons; and
 27 R_{14} is $(R_{15})_r$ -substituted alkyl of 1 - 6 carbons, $(R_{15})_r$ -substituted
 28 alkenyl of 1 - 6 carbons and 1 or 2 double bonds, $(R_{15})_r$ -

1 substituted alkynyl of 1 - 6 carbons and 1 or 2 triple bonds,
 2 $(R_{15})_r$ -phenyl, $(R_{15})_r$ -naphthyl, $(R_{15})_r$ -heteroaryl where the
 3 heteroaryl group has 1 to 3 heteroatoms selected from the group
 4 consisting of O, S and N, or R_{14} is $(CH_2)_pCO_2H$ or $(CH_2)_pCO_2R_8$
 5 where p is integer between 0 to 10, r is an integer having the
 6 values of 0 - 5, and

7 R_{15} is independently H, F, Cl, Br, I, NO_2 , $N(R_8)_2$, $N(R_8)COR_8$,
 8 $NR_8CON(R_8)_2$, OH, $OCOR_8$, OR_8 , CN, COOH, $COOR_8$, an alkyl
 9 group having 1 to 10 carbons, fluoro substituted alkyl group having
 10 1 to 10 carbons, an alkenyl group having 1 to 10 carbons and 1 to
 11 3 double bonds, alkynyl group having 1 to 10 carbons and 1 to 3
 12 triple bonds, or a trialkylsilyl or trialkylsilyloxy group where the
 13 alkyl groups independently have 1 to 6 carbons.

14 2. A compound in accordance with Claim 1 wherein Y is
 15 selected from the group consisting of phenyl, naphthyl, pyridyl,
 16 thienyl and furyl.

17 3. A compound in accordance with Claim 2 wherein Y is
 18 phenyl.

19 4. A compound in accordance with Claim 2 wherein Y is
 20 naphthyl.

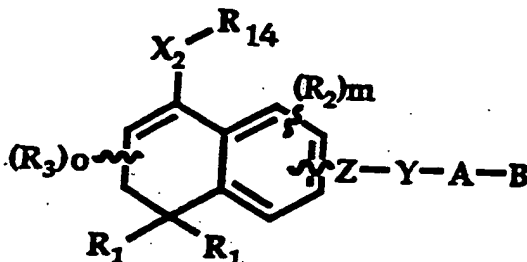
21 5. A compound in accordance with Claim 1 where n is 1.

22 6. A compound in accordance with Claim 1 where Z is
 23 selected from the groups consisting of $-(CR_1=CR_1)_{n'}$, $-N=N-$, $-$
 24 $CO-CR_1=CR_1-$, $-COO-$, and $-CONH-$ where n' is 0, 1, or 3 with
 25 the proviso that when n' is 3 then Y represents a direct valence
 26 bond between the $-(CR_1=CR_1)_{n'}$ group and the -A-B group.

27 7. A compound in accordance with Claim 1 where A is
 28 $(CH_2)_q$.

1 8. A compound in accordance with Claim 1 where B is
 2 COOH or a pharmaceutically acceptable salt thereof, COOR₉ or
 3 CONR₉R₁₀.

4 9. A compound of the formula



11 where R₁ is independently H or alkyl of 1 to 6 carbons;

12 Z is -N=N-,

13 -(CR₁=CR₁)_{n'}- where n' is an integer having the value 0 - 3,

14 -CO-NH-,

15 -COO-,

16 -CO-CR₁=CR₁-;

17 R₂ is hydrogen, lower alkyl of 1 to 6 carbons;

18 R₃ is hydrogen, lower alkyl of 1 to 6 carbons or F;

19 m is an integer having the value of 0 - 3;

20 o is an integer having the value of 0 - 4;

21 Y is phenyl, naphthyl, pyridyl or thienyl with the proviso that
 22 when n' is 3 then Y represents a direct valence bond between the
 23 Z and A-B groups;

24 A is (CH₂)_q where q is 0-5, lower branched chain alkyl having
 25 3-6 carbons, cycloalkyl having 3-6 carbons, alkenyl having 2-6
 26 carbons and 1 or 2 double bonds, alkynyl having 2-6 carbons and 1
 27 or 2 triple bonds;

28 B is hydrogen, COOH or a pharmaceutically acceptable salt

1 thereof, COOR_8 , $\text{CONR}_9\text{R}_{10}$, $-\text{CH}_2\text{OH}$, $\text{CH}_2\text{OR}_{11}$, $\text{CH}_2\text{OCOR}_{11}$,
 2 CHO , $\text{CH}(\text{OR}_{12})_2$, CHOR_{13}O , $-\text{COR}_7$, $\text{CR}_7(\text{OR}_{12})_2$, $\text{CR}_7\text{OR}_{13}\text{O}$, or
 3 $\text{Si}(\text{C}_{1-6}\text{alkyl})_3$, where R_7 is an alkyl, cycloalkyl or alkenyl group
 4 containing 1 to 5 carbons, R_8 is an alkyl group of 1 to 10 carbons
 5 or (trimethylsilyl)alkyl where the alkyl group has 1 to 10 carbons,
 6 or a cycloalkyl group of 5 to 10 carbons, or R_8 is phenyl or lower
 7 alkylphenyl, R_9 and R_{10} independently are hydrogen, an alkyl
 8 group of 1 to 10 carbons, or a cycloalkyl group of 5-10 carbons, or
 9 phenyl or lower alkylphenyl, R_{11} is lower alkyl, phenyl or lower
 10 alkylphenyl, R_{12} is lower alkyl, and R_{13} is divalent alkyl radical of
 11 2-5 carbons, and

12 R_{14} is alkyl of 1 - 6 carbons, CH_2COOH , CH_2COOR_8 or
 13 $(\text{R}_{15})_r$ -heteroaryl where the heteroaryl group has 1 to 3
 14 heteroatoms selected from the group consisting of O, S and N, r is
 15 an integer having the values of 0 - 5, and

16 R_{15} is independently H, F, Cl, Br, I, NO_2 , $\text{N}(\text{R}_8)_2$, OH,
 17 OCOR_8 , OR_8 , CN, COOH, COOR_8 , an alkyl group having 1 to 10
 18 carbons, or fluoro substituted alkyl group having 1 to 10 carbons.

19 10. A compound in accordance with Claim 9 where Y is
 20 phenyl.

21 11. A compound in accordance with Claim 9 where Y is
 22 naphthyl.

23 12. A compound in accordance with Claim 9 where A is
 24 $(\text{CH}_2)_q$ where q is 0 and where B is COOH or a pharmaceutically
 25 acceptable salt thereof, COOR_8 , or $\text{CONR}_9\text{R}_{10}$.

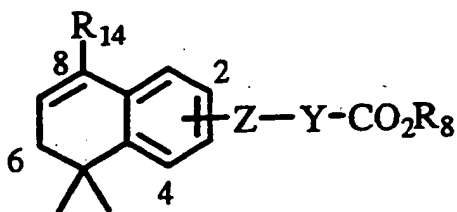
26 13. A compound in accordance with Claim 9 where the R_{14}
 27 group is 2-thienyl or 2-thiazolyl.

28 14. A compound in accordance with Claim 9 where the R_{14}

1 group is tertiary butyl.

2 15. A compound in accordance with Claim 9 where the R_{14}
3 group is CH_2COOH or CH_2COOR_8 .

4 16. A compound of the formula



11 where Z is $-\text{CH}=\text{CH}$, $\text{C}(\text{CH}_3)=\text{CH}-\text{CH}=\text{CH}-\text{C}(\text{CH}_3)=\text{CH}-$,
12 $\text{N}=\text{N}-$, $\text{CO}-\text{CH}=\text{CH}$, CONH , or COO ;

13 Y is phenyl or when Z is $\text{C}(\text{CH}_3)=\text{CH}-\text{CH}=\text{CH}-\text{C}(\text{CH}_3)=\text{CH}-$
14 then Y represents a direct valence bond between Z and CO_2R_8 .

15 R_8 is hydrogen or lower alkyl, and

16 R_{14} is CH_2COOR_8 , *t*-butyl, 2-thiazolyl or 2-thienyl.

17 17. A compound in accordance with Claim 16 where the Z
18 group is connected to the 2-position of the dihydronaphthalene
19 ring.

20 18. A compound in accordance with Claim 15 where the Z
21 group is connected to the 3-position of the dihydronaphthalene
22 ring.

23 19. A compound in accordance with Claim 18 where Z is
24 $\text{CO}-\text{CH}=\text{CH}$.

25 20. A compound in accordance with Claim 17 where Z is -
26 $\text{CH}=\text{CH}$, $\text{C}(\text{CH}_3)=\text{CH}-\text{CH}=\text{CH}-\text{C}(\text{CH}_3)=\text{CH}-$, $-\text{N}=\text{N}-$, CONH ,
27 or COO .